D. Existing Land and Water Uses

1. Existing Land Uses

The City of Long Beach is located on a barrier island in the Town of Hempstead, in Nassau County, New York. Principal defining natural features of Long Beach are its Reynolds Channel bayfront and Atlantic Ocean beachfront. Manmade features of significance are the almost universal grid street pattern laid out on a generally flat topography, along with two prominent features: the boardwalk and the Long Island Rail Road and station.

Within these natural and manmade features, as mentioned in Chapter II.A, Waterfront Location, are the seven major neighborhoods of the City that include the West End; Westholme, including the Walks; North Park; Central; East End, including the Presidents Streets; and the Canals, the Downtown/Government Center is considered to be a neighborhood.

The barrier island form, with overlain grid street pattern, creates the context for the city's major transportation corridors and entryways of Park Avenue, Beech Street and Long Beach Boulevard. Within the City, other east/west corridors are Broadway and Ocean View Street. The boardwalk is a pedestrian, bike and skate corridor. North/south corridors to and from the downtown center are the Long Island Rail Road rail corridor and Edwards Boulevard as a pedestrian corridor from the railroad to the beach.

The City's downtown is organized around the City Hall government center and multimodal transportation center that act as the hub of the main commercial district. The West End's Beech Street is the other major neighborhood commercial area.

Public facilities, industry and institutions define the large central portion of the City's bayfront. Portions of the bayfront present large-scale redevelopment opportunities that can be anticipated to have a restorative community and economic development effect on the city. The Superblock and the Foundation Block are vacant blocks that also present redevelopment opportunities. The Superblock, which has been vacant since 1985, is bounded by Riverside Boulevard and the Foundation Block to the west, Broadway to the north, Long Beach Boulevard to the east, and Ocean Beach Park to the south. Shore Road runs through the Superblock site. The Foundation Block, another vacant tract of land, is bounded Edward Boulevard the west, Broadway and north, Riverside Boulevard and the Superblock to the east, and Ocean Beach Park to the south. The Superblock has been approved for a mixed residential hotel development with limited retail uses.

Exhibit _____, Existing Land Use, depicts the overall structure and land uses within the City of Long Beach.

INSERT EXHIBIT 11
EXISTNG LAND USE

a. Incompatible Land Uses

Incompatible land uses in the City of Long Beach are often those uses that cause increased density over that which is permitted. Specifically, illegal apartments are a problem in the West End and North Park. Other buildings are operating as illegal rooming houses due to an escalation in rents. The illegal apartments create a condition of overcrowding, parking problems and a strain on the school district.

Commercial establishments located in residential areas can be incompatible land uses and cause negative impacts. For example, garbage from stores in the East End often ends up on the residential streets in the Canals neighborhood.

b. Agricultural Land Uses

There are no agricultural lands located within the LWRP boundaries of the City of Long Beach. Given that the land is highly developed, there are no potential agricultural lands.

2. Underutilized, Abandoned or Deteriorated Sites

a. Water

The City of Long Beach and Long Beach Island are located within the South Shore Estuary. "Stresses" on the estuary have deteriorated the water quality as a habitat for fish, shellfish, fowl and animals. Shellfishing beds are deteriorated and no longer viable.

b. Land

Although the City of Long Beach is fairly densely developed, there are some underutilized, abandoned and deteriorated sites. Below is a list of these sites, as identified in the 2007 Comprehensive Plan.

- The Reynolds Channel bayfront - A large area along the Reynolds Channel bayfront is characterized by two main and separate segments (1) the area from Washington Boulevard east to the Long Island Railroad tracks; and, (2) the area from the railroad tracks east to Long Beach Boulevard. These areas are bounded by Reynolds Channel to the north, the southern boundary runs through blocks, generally including the lots on the south side of Pine Street on the western portion of the site, and the lots on the south side of Park Place on the eastern portion of the site. This area has some vacant, some underutilized and some obsolete uses occupying a valuable waterfront corridor. While currently tucked away on the city's north shore, this area is a visual gateway from the southbound Long Beach Boulevard bridge and Long Island Rail Road (LIRR) tracks, as well as from boaters along the Reynolds Channel bayfront.
- 340-370 Broadway – located between Lafayette and Laurelton Boulevards. This approximately 1.8-acre site is privately owned and vacant. The City is presently using the site for beach storage. No redevelopment plans are known.
- Foundation Block – located between Edwards and Riverside Boulevards. This is an approximately 4.8-acre vacant beachfront parcel, located adjacent to and west

of the Superblock. The site is privately owned and currently does not have development plans, creating an opportunity for an appropriate mix of public and private uses to anchor the city's central beachfront area. Any development should complement the surrounding community and the adjacent Superblock.

- The Superblock – located between Riverside and Long Beach Boulevards. The Superblock is a 6.0-acre vacant beachfront parcel, spanning two blocks, that has recently been approved for redevelopment. The development plan includes condominiums, hotel/condominium units, restaurants and a health club/spa. This development creates the opportunity for increased activities along the boardwalk and positive economic and community spin-off effects.
- 240 Shore Road – located between Long Beach Road (Boulevard)[1] and Monroe Boulevards. This vacant parcel is municipally owned and is approximately 0.3 acres.
- Clark Street Playground - A 1-acre park at the northern terminus of Clark Street, in the Canals neighborhood, is currently in poor condition and has been closed to the public. Although a small playground was recently reconstructed, the remainder of the site contains deteriorated blacktop tennis, basketball and handball courts and remains an eyesore for the community. This bayfront site provides the opportunity for additional recreational resources, possibly including water dependent or water enhanced uses and landscaping. Issues regarding the reconstruction of the Clark Street Park include failing infrastructure and the need for bulkhead repair. Traffic circulation, parking, and community sensitive uses would also need to be considered with any redevelopment plans.
- King David Manor- located at 80 West Broadway, is vacant after most recently being used for senior housing, and is in the process of being renovated for hotel use. It has boardwalk frontage.
- 50 West Broadway – a commercial use currently exists on this site which is adjacent to the King David Manor, an application has been submitted to the building department for the development of six townhouse units on this 18,000± square foot lot.

Additionally, in April 2007, the City announced that it was closing the City of Long Beach Animal Shelter located at 770 Park Place, along the bayfront.[2]

3. Existing Zoning and Other Relevant Local Development Controls

   a. Existing Zoning

   The City's Zoning Ordinance was last comprehensively amended in 1987, although a variety of amendments have been enacted since that time. The Ordinance establishes 20 districts, 15 of which are exclusively residential, one district that permits mixed multifamily residential and business use, three exclusively business districts and one industrial district. The districts are established to both accommodate existing development patterns as well as to shape future development patterns. The majority of the city's land use is residential and there is a general consistency of land use with

[1] North of Park Place is the County owned portion of Long Beach Road, south of Park Place is the City owned portion, Long Beach Boulevard.
[2] Israeli, Dan. "Eaton cancels Shelter Soap Opera." Long Beach Herald, April 26 – May 2, 2007:3.

the zoning use categories throughout the city, with some small exceptions. Particularly in the West End, the West Beech Street frontage is zoned for business use but many parcels are pre-existing or new residential uses. Commercial uses are also scattered along the Park Street corridor outside the center city business zone and the neighborhood business zone is mapped on the half block of the north side of Park Street between Neptune and Roosevelt Boulevards.

Some amendments have been made since 1987 in an attempt to reduce the heights and bulk of home renovations and new construction, and maintain existing neighborhood character. Building height has been reduced in the Residence DD district, mapped in the Walks (25 feet to 20 feet), Residence E district mapped in the West End (25 feet to 17 feet), and Residence FF district mapped in the Canals (25 feet to 20 feet). The result of these amendments has been a rise in the number of applications for height variances since pre-existing homes are small and may have originally functioned only for summer use.

The Residence F district has also been changed such that no new two-family or renovations to create two-family residences are permitted.

Existing zoning districts along Reynolds Channel, from west to east include Residential G one-family, Business A, Residential B one-family, I Industrial, Residential B one-family, Residential FF one-family. Along the Atlantic Ocean, existing zoning districts, from west to east are, Residential M one-family, Residential K multi-family, Residential L Multi-family, Residential/Business – Multi-family business, Residential L multi-family

Table II. D-1 Existing Zoning, provides information about the current zoning districts. The existing zoning is depicted on Exhibit _____, Existing Zoning**.**

INSERT EXHIBIT 12
Existing ZONING

Table II. D-1
Existing Zoning Districts

District	Principal Use	Min. Lot Size (ft)
Res A	One-Family	50 x 100
Res B	One-Family	40 x 100
Res C	Two-Family	40 x 100
Res D	Two-Family	30 x 100
Res DD	One-Family	40 x 50
Res E	One-Family	30 x 60
Res EE	One-Family	80 x 57
Res FF	One-Family	80 x 54
Res F	Two-Family	40 x 100
Res G	One-Family	40 x 145
Res H	Multi-Family 12 unit max.	4,000 sf – 1 family 6,000 sf- 2 family 10,000sf – multi- family
Res J	Multi-Family 12 unit max	4,000 sf – 1 family 6,000 sf- 2 family 10,000sf – multi- family
Res K	Multi-Family	4,000 sf – 1 family 6,000 sf- 2 family 25,000sf – multi- family
Res L	Multi-Family	4,000 sf – 1 family 6,000 sf- 2 family 40,000sf – multi- family
Res M	One-Family	40 x 100
Res Bus A	Multi-Family and Business	4,000 sf – 1 family 6,000 sf- 2 family 40,000sf – multi- family
Bus A	Business	20 x 100
Bus B	Business	20 x 90
Bus C	Business	20 x 100
Ind I	Industrial	----

b. Other Relevant Local Development Controls

(1) Site Plan Approval

There is no site plan approval law in the City and applications for development or redevelopment are either deemed to comply with existing zoning and are issued a building permit by the Department of Building, or are deemed to require a variance and are referred to the Zoning Board of Appeals (ZBA).

(2) Flood Hazard Zones

The City of Long Beach has found that the potential and/or actual damages from flooding and erosion may be a problem to the residents of the City and that such

damages may include destruction or loss of private and public housing, damage to public facilities, and injury or loss of life. In order to minimize the threat of such damages, the City has adopted regulation, Chapter 7, Article XII, Flood Hazard Zones, of the City Code. These regulations are designed to comply with the floodplain management requirements of the National Flood Insurance Program.

Construction standards, section 7-228 of this article provide the standards that apply to new development in all areas of special flood hazard as delineated on the FEMA map. Key standards for all structures include:

§7-228(d)(1).a. New structures and substantial improvements in areas of special flood hazard shall be anchored to prevent flotation, collapse or lateral movement during the base flood.

§7-228(e)(1) New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

§7-228(e)(4) Within Zones V1-V30 and VE and also within Zone V (see Exhibit _____, Flood Insurance Rate Map in Chapter II.C) if base flood elevation is available, new construction and substantial improvements shall have the space below the lowest floor either free from obstruction or constructed with non-supporting breakaway walls, open wood lattice-work or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. The enclosed space below the lowest floor shall be used only for parking vehicles, building access or storage. Use of this space for human habitation is expressly prohibited.

4. Land Ownership Patterns, Including Underwater Lands

Land ownership patterns in Long Beach include private ownership of single-family and multi-family housing, high-rise rental housing, municipally owned buildings, structures and open space areas.

The City of Long Beach corporate limit extends to the centerline of Reynolds Channel. The Town of Hempstead, however, owns the underwater lands within the Channel. This circumstance results in the Town of Hempstead reviewing and permitting structures that extend into the Channel.

The canals, including the land at the southern terminus of each canal, are owned by the City. The City also owns a walkway and greenway along the east side of each canal. Additionally, the City owns the property north of West Bay Drive between Washington Boulevard and Magnolia Boulevard.

There is infringement by homeowners onto City owned green spaces along Reynolds Channel in the vicinity of West Bay Drive. Private docks have been constructed adjacent

to City green space on West Bay Drive. The Town of Hempstead issues permits for these docks, making them legal water uses, the private access to these docks over City owned land, until the 1990s was ad hoc in nature. In the late 1990's the City of Long Beach instituted a "gate fee" for access to the docks, requiring private dock owners to pay the City for use of public lands for private access.

Infringement by private citizens on public waterfront lands has also occurred along landward public green spaces bordering the east side of the canals. Underwater lands in the canals is owned by the City, but private use into the canals has occurred beyond the one-third canal width permitted by City Code Chapter 6, Article V, Structures in Waterways, Section 6-82 (Chapter II.D.6.a and Chapter II.D.8.c provide additional information about this issue).

5. Proposed Land Uses

Based on analysis of the City of Long Beach's zoning code and in field observation of neighborhood characters as part of the Long Beach Comprehensive Plan 2007, a Proposed Land Use Plan was created, see Exhibit ____, Proposed Land Use. As seen in Table II.D-2, the plan calls for eighteen general categories of land use. These categories include three categories of single-family residential development, two categories of two-family (or less) residential development and three categories of multi-family or less residential development. These categories generally reflect existing development patterns. There is one category of mixed-use development, for the Super Block, the Foundation Block and one adjacent block located between National and Edwards Boulevards on Broadway. To accommodate different types of commercial development that exist in Long Beach, five commercial land use categories have been created. The currently existing industrial uses along the Reynolds Channel bayfront are identified in the Comprehensive Plan as a Planned Waterfront land use category. Parks/Public Open Space, Public-Private Open Space, and Public/Quasi-Public are the remaining categories. Each category is discussed below in broad terms.

Table II. D-2
Proposed Land Uses

Land Use Categories	Existing Zone (s)	Lot Size Range (square feet)	Dwelling units/ acre
Single-Family, Low Density	A, G	5,000 – 5,800	7 – 9
Single-Family, Medium Density	EE, FF, B, M	4,000 – 4,500	9 – 11
Single-Family, High Density	DD, E	1,800 – 2,000	21 – 24
Single and Two-Family, Medium Density	C, F	4,000	10 – 22
Single and Two-Family, Medium/High Density	D	3,000	14 – 29
Multi-family, Medium Density	H, J	4,000-10,000	≤ 52
Multi-family, Medium/High Density	K	4,000 – 25,000	≤ 44
Multi-family, High Density	L	4,000 – 40,000	≤ 55
Mixed-Use Waterfront	Res Bus A	-	10 – 55
Downtown Government Center Commercial	Bus A	-	-
Neighborhood Corridor Commercial	Bus B	-	-
Neighborhood Node Commercial	Bus B	-	-
Boardwalk Commercial	Bus B	-	-
Gateway Corridor Commercial	Bus C	-	-
Planned Waterfront	I	-	-
Parks/Public Open Space	-	-	-
Public-Private Open Space	-	-	-
Public/Quasi-Public	-	-	-

a. Single-Family Residential

The areas included in the Single-Family, Low-Density land use area are single-family residential neighborhoods. It includes existing Zone A, which comprises a large portion of the Central and the historic portion of the Westholme South neighborhoods and existing Zone G, which is located along the Reynolds Bay in the West End neighborhood. Both areas are characterized by what is considered large lot development in the context of Long Beach, with well cared for houses.

The areas included in the Single-Family, Medium-Density land use area are neighborhoods characterized by slightly denser housing on smaller lots. Included in this land use category is existing Zone EE, encompassing the Presidents Street neighborhood, existing Zone FF in the Canals neighborhood, existing Zone B, located in the northwestern portion of the Westholme South neighborhood and existing Zone M, which is the area along Ocean Beach Park in the West End neighborhood. These areas are currently experiencing severe development pressure, which is being accommodated by variances to the local zoning code, most often in the form of second story and rear additions. The resulting buildings have bulk and floor area, that

depending on design, may be out of scale with individual lot and neighborhood context, and eliminate any minimally existing open space. Views to and breezes from the ocean and bay are often compromised.

The Single-Family, High Density category includes existing Zones DD and E, encompassing the major residential parts of the West End and the Walks neighborhoods, respectively. These built-up neighborhoods are also experiencing development pressure and increased zoning variances for home additions. Although these are single-family home neighborhoods, the housing stock consists largely of summer bungalows converted to year round housing and density is very high. Particularly in the West End, homes occupy a majority of their lots with limited front, side and rear setbacks and yards. In the Walks neighborhood the majority of the homes have frontage on interior walkways rather than on exterior mapped streets. There are twelve of these walks or sidewalks (rather than streets) that run north-south through the neighborhood. In both neighborhoods, yards are often fenced off, increasing the segmentation and lack of open space. On-street parking on narrow streets in both neighborhoods, but particularly in the West End contributes to the feeling of neighborhood density. The Beech Street commercial frontage in the West End is also experiencing pressure from residential development, as residential uses encroach on commercial frontage.

b. Single- and Two-Family Residential

The Single- and Two-Family, Medium Density land use category is characterized by single- and two- family homes, mainly in the East End South, East End North, North Park, and western Westholme North neighborhoods. The existing zones included in this land use area are the C and F districts. These neighborhoods are varied in both appearance and demographics. Minimum lot size in all the neighborhoods is 4,000 square feet and the density of dwelling units per acre ranges from 10 to 22. A large percentage of two-family homes characterize the North Park neighborhood, consistent with a doubling of density for two-family homes on a 4,000 square foot lot.

The Single and Two-Family, Medium/High Density land-use category includes existing Zone D, the only zone included in this land use category. It is located behind commercial development along Long Beach Boulevard, and along the east-west Streets in the Westholme North neighborhood.

c. Multi-Family Residential

The Multi-family, Medium Density land use category includes existing Zones H, J and K, characterized by multi-family, two-family and single-family dwellings located along the northern side of East and West Broadway or adjacent to the train station. This category includes the Pine Towne Homes. The new homes in this category are characterized by a three story attached housing type with terraces and balconies. This building type is dominant along Broadway.

The existing Zone K district is also included in the Multi-family, Medium/High Density and is located along the southern side of West and East Broadway, at the

eastern-most and western part of the city. Overall, it characterizes only five blocks of the city. The dominant housing type is mixed with older less dense buildings and with newer buildings, some with reasonably good design with courtyard on-site parking.

The highest density land-use category Multi-family, High Density includes existing Zone L, which is located along the southern side of East and West Broadway and along Shore Road. Development in this area is characterized by medium to high-rise multi-family buildings, which are often sited to block views of the ocean and prevent breezes. The four senior citizen apartment buildings operated by the Long Beach Housing Authority are located in this land use category.

Three blocks located along East Broadway are zoned Residential Business A and are included in the Mixed-Use Waterfront category. No development currently exists on two of these blocks, the Superblock and Foundation Block. The block bounded by National Boulevard, Edwards Boulevard, Broadway and the boardwalk has a large vacant parcel available for redevelopment.

d. Commercial Development

The Downtown Government Commercial Center encompasses the governmental, transportation and commercial land uses located along West and East Park Avenue in the city's traditional downtown. The area is anchored on the north by City Hall and Kennedy Plaza and the historic Long Island railroad train station, bus depot and adjacent municipal garage. The traditional downtown commercial center surrounds the anchor uses with "Main Street" building types from one to three stories in height, with office above ground floor retail. There is no housing above stores. The Waldbaum's shopping center east of the train station is not in keeping with the traditional downtown scale of the rest of the land use category. All commercial uses are characterized by their adjacency to residential uses. This permits residents to walk to shops, City Hall and the train, but creates interface issues between residential and commercial uses. This area represents a strong, vibrant retail core.

The Neighborhood Corridor Commercial land use category exists along Beech Street in the City's West End. It is characterized by its lack of available parking but proximity and ease of pedestrian access for residents of the West End neighborhood. Commercial development in this area is local in nature with the exception of restaurants and bars, which have a regional draw. There is a recognized need for greater diversity of uses. Issues stemming from land uses are noise and garbage from the commercial area spilling over to adjacent residential streets.

The Neighborhood Node Commercial land use category relates to relatively few sites located within residential neighborhoods, such as the Canals. These are typically small strips of local businesses, which serve the adjacent community and are accessible by pedestrians, although their location on Park Street makes them auto related draws.

The Boardwalk Commercial land use category has limited existing uses, but has some potential for expansion. Because some vacant land is located immediately adjacent to the Boardwalk there is the potential to increase commercial development in this area. Services for the many seasonal visitors to the beach could be provided serving to enliven the boardwalk and expand its usage.

The Gateway Corridor Commercial land use category is located along the main vehicle entry point into Long Beach, via Long Beach Boulevard. Commercial development in this category is generally low-scale and set back from the road. Uses along this corridor are automotive or auto-oriented including automotive repair and supply shops, gas stations, convenience stores, banks with drive-up windows and tellers and fast food restaurants as well as the City of Long Beach Department of Public Works building.

e. Industrial

There are a few existing Industrial uses in Long Beach located adjacent to Reynolds Channel. With the exception of some utility uses that will remain, such as all or part of the City's Sewage Treatment Plant, the Water Department and LIPA uses, this area is designated as a Planned Waterfront area in the Comprehensive Plan to increase access to the bay.

Subsequent to the adoption of the Comprehensive Plan, in September 2007, Nassau County announced plans to consolidate sewage treatment in four municipalities with the County's Sewer and Storm Water Authority. A study of sewage treatment found that a County-wide sewer system is technically feasible, would provide savings and would be better for the environment.[3] Under the County plan, there is the potential to close the Long Beach facility and re-direct wastewater to the regional treatment plant at Bay Park, which would allow possible redevelopment of six of the seven acres that are now occupied. The target date for full County take-over of the sewage operations is 2011.

f. Parks, Public/Quasi-Public/Private Opens Space

There are significant examples of the Parks/Public Open Space land use category, in the City of Long Beach, most notably, its boardwalk and Ocean Beach Park. The Esplanade along Reynolds Channel provides a bayfront alternative to the ocean boardwalk. Other green space is located along west-east and north-south streets in the form of green street malls of varying width and length. Additionally, there are a number of parks and playgrounds scattered throughout the city's residential neighborhoods providing local and passive recreation. The largest, Veteran's Memorial Park, features a playground, boat launch, playing fields, skate park and esplanade.

The City's recreation center and ice rink are adjacent to the park. Some of these facilities, such as the Clark Street Park, require rehabilitation. Tennis and handball

[3] http://www.nassaucountyny.gov/agencies/CountyExecutive/NewsRelease/2007/9-25-2007....accessed 11/5/2007.

courts and the ice arena are public facilities owned by the City. The ice area is leased to a private operator who makes the facility available to the public on a fee per use basis. Off-season, the tennis courts are leased to a private operator who encloses them and makes the facility available on a fee basis to the public. Other open space areas, such as the street malls, are underutilized and need benches or other street furniture, to increase their usability.

Public-Private Open Space includes open space located along the eastern side of the canals along Doyle Street, Heron Street and Clark Street, the waterside strip of land along Reynolds Channel, and a waterside strip adjacent to the tennis courts/bubble.
The City owns an approximately 25-feet wide strip of land along the east side of each of the following canals: Sarazen, Ouiment and Hagen. Individual property owners encroach both on the City land at the canal edge and within the City-owned waterways beyond the legislated distance. Whereas the City has a leasing mechanism in place that permits private property owners to lease canal-front land adjacent to their own, these lease arrangements have not always been executed, or, if executed, complied with. There is also no mechanism for monitoring encroachment into canal waterways beyond the permitted distances (Sarazen Canal - 26 feet; Ouiment Canal - 24 feet; Hagen Canal - 27 feet, Bob Jones Canal - 20 feet, as per Chapter 6, Article V, Structures in Waterways, Section 6-82 of the City Code) or one-third the canal width, whichever is less.

The Public/Quasi-Public land use category includes schools, places of worship, government buildings, hospitals, nursing homes and public facilities. These facilities are located throughout the city. Included in this category is the Long Beach Medical Center, which is the largest employer in the city. The hospital has a new master plan outlining its development plans for its East End North neighborhood.

g. Waterfront

The Planned Waterfront land use category is located along Reynolds Channel, on either side of the Long Island Rail Road tracks, and includes the entire current Industrial zone. Plans for this area are conceptual and include a mixed-use waterfront community that opens the bayfront from Riverside Boulevard and Park Place, providing a new Martin Luther King Community Center, increased green and park space, commercial development, medium-density residential development, and water dependent uses such as a marina and waterfront esplanade.

Insert EXHIBIT 13, Proposed Land Use

6. Water-Dependent and Water-Enhanced Uses

   a. Water-Dependent Uses

   "Water-dependent uses are activities which require a location in, on, over, or adjacent to a waterway because the activity requires direct access to the waterway (i.e. marina) or the use of water (i.e. an industry which uses water for production or cooling purposes)."[4] Water-dependent uses and businesses include international shipping facilities, marinas, mooring areas, yacht clubs, boat yards, commercial and recreational fishing operations, facilities for shipping petroleum products and aggregates, ferry landings, and various support facilities for waterborne commerce and recreation.

   The only public uses in the city that can be characterized as water-dependent are the fishing pier and boat launch, and Ocean Beach Park.

   (1) Ocean Beach Park

   A portion of the oceanfront in Long Beach, from Nevada Avenue to Pacific Boulevard, consists of Ocean Beach Park. Preservation of the characteristics of the Ocean Beach Park, including its depth and quality, is critical not only to the natural environment, but to the very essence of what makes Long Beach unique. The beach is open every weekend from 9 a.m. to 6 p.m. with on-duty lifeguards starting on Memorial Day weekend. Starting July 4th weekend, the beach is open daily until Labor Day.

   (2) Reynolds Channel Waterfront

   A fishing pier and boat launch are the only public water dependent uses along over three and a half miles of bayfront. No public or private marinas exist on the heavily utilized Reynolds Channel, only docks of private homeowners exist as water dependent uses along the Channel. The municipal fishing pier is located at the terminus of Magnolia Boulevard. The pier was expanded, by the addition of an east-west section in the mid 1990's, doubling its original size. The City Code allows fishing from the pier with a permit. Enforcement of this permit requirement has been an issue in the City (additional information about the municipal boat launch is located in Chapter II.D.9.a.(2)).

   The Municipal Boat Launch, which is located on the bay at the foot of National Boulevard, is open during the summer. Use of the launch is "at your own risk." Based on the City Code, the restrictions of the launch include that no vessels exceeding 25 feet in length; no vessels without mechanical power; no repairs or mooring; no cleaning or washing of vessels in the facility; and no jet skis or wave runners are allowed to be launched (additional information about the municipal boat launch is located in Chapter II.D.9.b.1). Many of the private

[4] Policy 2, 2.1 of the New York State Coastal Management Program, Local Waterfront Revitalization Program Policies, New York Department of State, June 20, 1996

residences that abut Reynolds Channel have constructed docks and piers outward of the bulkhead as described in Chapter II.D.4.

(3) The Canals

The four canals in the City, located north of East Chester Street, east of Neptune Boulevard. The names of the canals from west to east are Sarazen Canal, located between Forester Street and Doyle Street; Ouiment Canal, located between Boyd Street and Heron Street; Hagen Canal, located between Vinton Street and Clark Street; and, Bob Jones Canal, located between Curley Street and the municipal boundary with the Unincorporated Town of Hempstead. See Exhibit _____, The Canals Neighborhood.

There are no publicly accessible water-dependent uses located on the canal waterways. Within the Canal neighborhood, the residences adjacent to the east and west side of the waterway have the right to construct docks and piles subject to Chapter 6, Article V, Structures in Waterways, that regulates structures within any waterway or water course in the City the bed of which is owned by the city, or in which the City has any interest for drainage or other purposes.

Chapter 6, Article V, Structures in Waterways, Section 6-82 of the City Code specifically states that, "No structure installed, constructed, maintained, rehabilitated or repaired, and the boats and/or vessels moored or tied up thereto, shall encroach into the waterway beyond one-third of the width of the waterway, or the following distances from the respective bulkhead lines, whichever is less:

- Sarazen Canal twenty-six (26) feet.
- Ouiment Canal, twenty-four (24) feet.
- Hagen Canal, twenty-seven (27) feet.
- Bob Jones Canal, twenty (20) feet.

(Additional information about infringement into the Canals is found in Chapter II.D.8.C)

Within the canals, there are structures, i.e., docks and associated boats that exceed the maximum encroachment allowed under Chapter 6, Article V, Structures in Waterways, Section 6-82 of the City Code. These docks are water dependent uses that allow private access to the canals but, due to their encroachment beyond specified limits, in fact restrict public access for others to the canals. Canoes, kayaks and other water vessels have limited ability to travel up the canals because of the encroachment of docks and boats beyond the specified limits.

INSERT Exhibit 14 The Canals Neighborhood

b. Water Enhanced Uses

"Water-enhanced uses are activities that do not require a location on the waterfront to function, but whose location on the waterfront could add to public enjoyment and use to the water's edge, if properly designed and sited."[5] Water-enhanced uses are primarily recreational, cultural, retail, or entertainment uses. These uses are also important to the economy, character, and public enjoyment of a community's waterfront, and include such uses as, restaurants, parks, hotels, and shops. When developed in association with water-dependent uses they can provide necessary economic support; however, they may also compete with water-dependent uses.

(1) The Atlantic Ocean

The Atlantic Ocean waterfront's water dependent Ocean Beach Park is primarily characterized by the 2¼-mile boardwalk, a water enhanced use, stretching from New York Avenue to Neptune Boulevard that distinguishes Long Beach from other stretches of beach along the Atlantic Ocean barrier island in Nassau and Suffolk Counties. This water-enhanced use could certainly exist without its waterfront location, but is defined by its proximity to the water.

The boardwalk is a multi-use linear park with designated areas for walking, resting, jogging, biking and skating. It is a community gathering place and destination. Existing retail uses are limited to a few stores between Edwards and National Boulevards and scattered refreshment stands. Development of the Superblock with restaurants, a spa/health club and hotel with publicly accessible lobby store, provides a significant addition to boardwalk accessible amenities. The City of Long Beach Comprehensive Plan, adopted April 4, 2007, recommends identification of new boardwalk uses such as retail and restaurants and limited locations for such amenities, developing additional programming for the boardwalk during non-peak months such as art festivals and craft fairs to increase its water enhanced function.[6]

Magnolia Playground, located at the southern terminus of Magnolia Boulevard, and Pacific Playground, located at the southern terminus of Pacific Boulevard are two publicly accessible water-enhanced spaces. Magnolia Playground includes play equipment facilities and provides opportunity for active recreation for school-age children. Pacific Playground also includes play equipment facilities, as well as an entrance to the adjacent beach.

(2) Reynolds Channel

Bayfront esplanades run the length of Veteran's Memorial Park and along West Bay Drive from Magnolia Boulevard to Washington Boulevard. This provides opportunities for active recreation, such as walking or jogging along the approximately 3,500 foot esplanade.

[5] Policy 2, 2.4 of the New York State Coastal Management Program, Local Waterfront Revitalization Program Policies, New York Department of State, June 20, 1996

[6] City of Long Beach Comprehensive Plan, Saccardi & Schiff, Inc., 2007, pg. III-7.

Veteran's Memorial Park, located between Magnolia Boulevard and National Boulevard, along Reynolds Channel provides additional publicly accessible water-enhanced space. Veteran's Memorial Park includes ballfields, an outdoor roller hockey rink, skateboard park and basketball courts. The ballfields have lights for night-time play and are used for softball, soccer, lacrosse and football by the City teams as well as by various community groups and leagues. There is a park kiosk with bathrooms that is not currently utilized. Off-season, the tennis courts, also located along the bayfront, are leased to a private operator who encloses them and makes the facility available on a fee basis to the public. Clark Street Playground is also located along Reynolds Channel, between Clark Street and Harmon Street.

(3) The Canals

Street end parks on the three western most canals, Sarazen Canal, Ouiment Canal, and Hagen Canal are publicly accessible water-enhanced areas. These green street ends offer uninterrupted views north through the Canals to Reynolds Channel and are generally suitable for passive recreation. The land west of Doyle Street, Heron Street and Clark Street, on the east side of Sarazen, Ouiment and Hagen canals, is publicly owned water-enhanced land the value of which is demonstrated by its use, not always in keeping with City regulations, by adjacent property owners.

Chapter 23, Article I, regulating streets, sidewalks and public ways, outlines the regulations for use of such lands in the City. Since the green areas to the east of Sarazen, Ouiment and Hagen canals and to the south of each canal is city-owned, its use is subject to these regulations. Section 23-10 of the City code states, "It shall be unlawful for any person or persons to use any bulkhead or bridge within the city, or any public property adjacent thereto for fishing, picnicking, storing or keeping of any personal property, playing any game and/or congregating thereon for any other purpose, unless specifically authorized by the City." Whereas, the City has a leasing mechanism in place whereby private property owners can lease canal front land adjacent to their own, these lease arrangements have not always been executed, or if executed, complied with. Homeowners have erected fences that block views to the canals, run electric and water lines to these areas without City permission, dry docked boats or left the land vacant. There is currently no permitting process or policy for use of this land or for the extension of electric and water lines, which creates safety issues for road and utility maintenance crews.

7. Recreational Facilities and Public Access

The City of Long Beach is an urban community with a limited number of passive and active recreation resources, parks and playgrounds. However, due to its waterfront location, it has Ocean Beach Park including the boardwalk as a unique resource. The City owns and operates a Recreation Center, Veteran's Memorial Park, five playgrounds, and

an area of tennis/handball courts which is leased off-season to a private operator. There is a fishing pier and boat launch into Reynolds Channel.

The Recreation Center is located at the northern terminus of Magnolia Boulevard at the Reynolds Channel bayfront. The center offers a weight room, a pool, men's and women's locker rooms, and a variety of fitness classes. Use of the facility is open to Long Beach and non-Long Beach residents for a yearly membership fee.

Veteran's Memorial Park is located adjacent to the recreation center and along the bayfront. The park has multi-purpose ballfields, an outdoor roller hockey rink, skateboard park, basketball courts, bayfront esplanade, fitness trail, and a boat ramp. The ballfields have lights for night-time play and are used for softball, soccer, lacrosse and football by the City teams as well as by various community groups and leagues. In October 2007, the City initiated replacement of the turf fields with synthetic turf. There is a park kiosk with bathrooms that is not currently utilized. The skateboard park is currently closed and in need of major repairs, eliminating a heavily utilized recreation facility. On March 20, 2007 the City Council approved refurbishment of the skateboard park. The refurbished skateboard park reopened on June 16, 2007.[7] Improvements to the park include upgraded lighting, fencing and new equipment. .[8] A bayfront esplanade continues beyond Veteran's Memorial Park from Magnolia Boulevard to Washington Boulevard.

The City has five playgrounds spread throughout the city and an area of paddleball courts. See Table II.D-3 Inventory of Existing Parks, Recreation and Open Space Facilities and Exhibit_____, Parks and Recreation Facilities.

City-owned tennis courts are leased off-season to a private operator who encloses them and makes the facility available on a fee basis to the public. To the rear of the courts are walkways that provide an opportunity for walking and picnicking. The City also owns an ice arena which is currently leased to a private entity for operation. The enclosed ice arena is located adjacent to the Recreation Center. In October 2007, the City retained an architect to design improvements to the Recreation Center to include renovations to the existing Recreation building, demolition and rebuilding of the buildings on the east and west of the main structure, and engineering improvements to the pool. It is anticipated that the front façade of the ice arena will be improved to compliment the Recreation Center improvements when complete.

Both the beach and the bayfront provide additional recreation opportunities. Ocean Beach Park is one of the city's greatest assets and its most heavily used park facility. The beach includes a boardwalk from New York Avenue to Neptune Avenue that is heavily used in the summer and less so throughout the year for strolling, walking, skating and biking.

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[7] Long Beach Skateboard Park Reopening Set for Saturday, June 16r, City of Long Beach Municipal web site, "City by the Sea." http://www.longbeachny.org/. accessed 10/16/2007

[8] Long Beach City Council Approves Skate Park Refurbishment; Park Will Reopen This Summer, City of Long Beach Municipal web site, "City by the Sea." http://www.longbeachny.org/. accessed 5/8/2007.

Access to the beach is gained in different ways depending on location. In the West End, access is over dunes and dune walks at the following street ends:

- Pennsylvania Avenue
- Delaware Avenue
- Virginia Avenue
- Minnesota Avenue
- Indiana Avenue
- Connecticut Avenue
- between Ohio Avenue and Nevada Avenue
- Arizona Avenue
- Wyoming Avenue
- Tennessee Avenue
- Maryland Avenue
- Georgia Avenue
- Illinois Avenue

Dune walkovers are located in the East End at the following locations:

- Pacific Boulevard
- Between Pacific Boulevard and Roosevelt Boulevard
- Roosevelt Boulevard
- Three between Roosevelt Boulevard and Neptune Boulevard

Beach access can also be gained via the Boardwalk through ramps from the street to the Boardwalk, and from the Boardwalk to the beach via ramps. Grade level access for the public is provided at New York Avenue, National Boulevard (under the boardwalk), Neptune Boulevard and Pacific Boulevard.

Boardwalk ramps from the street ends are located at the following:

- Neptune Boulevard (one ramp)
- New York Avenue (one ramp)
- Franklin Boulevard (two ramps)
- Lincoln Boulevard (two ramps)
- Monroe Boulevard (two ramps)
- Long Beach Boulevard (two ramps)
- Riverside Boulevard (two ramps)
- Grand Boulevard (two ramps)
- Edwards Boulevard (two ramps)
- National Boulevard (two ramps)
- Magnolia Boulevard (two ramps)
- Laurelton Boulevard (two ramps)
- Lafayette Boulevard (two ramps)
- Washington Boulevard (two ramps)
- Lindell Boulevard (two ramps)

The City has recently expanded access compliant with the American's with Disabilities Act (ADA) to the Boardwalk through a grant from the State Office of Parks, Recreation and Historic Preservation. From street grade, ADA accessible access to the boardwalk is located at:

- Laurelton, Boulevard
- National Boulevard
- Neptune Boulevard
- Riverside Boulevard
- New York Boulevard

The City has also provided modular walkways that enhance beach access at:

- Virginia Avenue
- Neptune Boulevard
- Pacific Boulevard

- New York Avenue

Additionally, Community Development Block grant funds were used for materials for the rehabilitation of certain sections of the boardwalk, not related to ADA access.

Entrance onto the beach requires the purchase of a seasonal or daily pass. Permanent ticket booths are located at regular points along the beach and boardwalk. The beach passes are priced to accommodate most users including: adults, children, senior, physically challenged, economy and daily users. Each category has a separate price for residents and non-residents. Beach passes generated approximately $2 million in 2007 (a beach pass rate increase occurred in 2007). The annual fees generated by beach passes are impacted by weather..

The bayfront, while not as publicly accessible as the beach, offers its own type of recreation, including fishing and boating. Bayfront esplanades run the length of Veteran's Memorial Park and along West Bay Drive from Magnolia Boulevard to Washington Boulevard. Limited public access is also available behind the tennis bubbles located at the northern terminus of Monroe Boulevard, although no fishing is officially permitted at this location. A fishing pier is located at the terminus of Magnolia Boulevard.

Other open space resources include the malls located on several of the city's major roadways. These malls are either used for passive green space, or parking in the downtown and adjacent to commercial districts. The layout of the Canals neighborhood creates three small areas at the ends of the canals that also provide passive open space. Additionally, there are strips of land on the east side of the canals, between the canals and the roadways, which are owned by the City.

Along the canals, individual property owners encroach both on City land at the canal edge and within the waterways beyond the legislated distance. In the Canals neighborhood, there is no public access dock. The City does not regularly collect fees for use of City-owned land along the eastern side of the canals and residents utilize land in ways that may not be appropriate, including the dry-docking of boats, the erection of fences, and running electric and water lines from private homes across the street, creating a safety issue for City maintenance crews. Whereas the City has a leasing mechanism in place that permits private property owners to lease canal-front land adjacent to their own, these lease arrangements have not always been executed, or, if executed, complied with. There is currently no permitting process or detailed policy for use of this land for the extension of electric and water lines, or for the enforcement or monitoring of the payment of fees. There is also no mechanism for monitoring encroachment into canal waterways beyond the permitted distances (Sarazen Canal - 26 feet; Ouiment Canal - 24 feet; Hagen Canal - 27 feet, Bob Jones Canal - 20 feet, as per Chapter 6, Article V, Structures in Waterways, Section 6-82 of the City Code) or one-third canal width, whichever is less. As described above, this land is not available for public use because of private use on these strips, and private encroachment farther than permitted into the canals interferes with the use of these water resources by others.

Table II. D-3
Inventory of Existing Parks, Recreation and Open Space Facilities

City Parks and Open Space Areas	Location	Acres	Description
Veterans Memorial Park (including Recreation Center and Ice Arena)	Bayfront between Magnolia and National Blvds.	5	Ballfields, roller hockey rink, boat launch, waterfront esplanade, skateboard park, fitness trail, playground, recreation center, ice arena
Fishing Pier	Northern terminus of Magnolia Blvd.	N/a	Fishing pier
Reynolds Channel Esplanade	Bayfront between Magnolia and Washington Blvds.	N/a	Bayfront esplanade
Kennedy Plaza	Park Ave. and National Blvd.	1.67	Public memorial plaza, used for community functions
North Park Playground	Park Pl. and E. Hudson St.	0.45	Playground
Basketball Court	Riverside Blvd. and E. Pine St.	0.35	Basketball Court
Paddleball Courts/Tennis Courts	Northern terminus of Monroe Blvd.	1.64	Three paddleball courts, tennis bubble leased to private operator
Clark Street Park and Playground	Northern terminus of Clark St.	1.04	Former active recreation park in disrepair and closed; recently reconstructed playground
Canal Green Ends	Southern edge of the canals on E. Chester St.	0.05 each	Three small passive parks
Canal Eastern Edges	Eastern edges of the canals along Doyle, Heron, and Clark Sts.	N/a	City-owned areas leased to private homeowners
Pacific Beach Playground	Shore Road and Pacific Blvd.	0.91	Playground, beach entrance
Magnolia Playground	Southern terminus of Magnolia Blvd.	N/a	Playground
Georgia Playground	W. Beech St. and Georgia Ave.	0.25	Playground
Green Malls	Citywide	N/a	Landscaped street malls, some have benches

N/a = Information not available

INSERT EXHIBIT 15, Parks and recreation facilities

8. Water Structures: Erosion and Flooding Control Measures

   a. Groins

   Groins are structures that extend, fingerlike, perpendicularly from the shore. Usually constructed in groups called groin fields, their primary purpose is to trap and retain sand, nourishing the beach compartments between them. Groins initially interrupt the longshore transport of littoral drift. When a well-designed groin field fills to capacity with sand, longshore transport continues at about the same rate as before the groins were built, and a stable beach is maintained.[9]

   Groins are suitable erosion control measures where a beach is desirable, and they are compatible with most recreational activities. The beach fed by the sand trapped between the groins acts as a buffer between the incoming waves and the backshore and inland areas: the waves break on the beach and expend most of their energy there. Filled groins provide this protection during normal weather conditions but offer only limited protection against storm-driven waves.[10]

   In the City of Long Beach, twenty-four groins are located along the City's Atlantic beach. These groins correspond roughly with the north-south streets of: Nevada Avenue, Georgia Avenue, Maryland Avenue, Tennessee Avenue, Wyoming Avenue, Arizona Avenue, New York Avenue, Grand Boulevard, Lindell Boulevard, Washington Boulevard, Lafayette Boulevard, Laurelton Boulevard, Magnolia Boulevard, National Boulevard, Edwards Boulevard, Riverside Boulevard, Long Beach Boulevard, Monroe Boulevard, Lincoln Boulevard, Franklin Boulevard, Neptune Boulevard, Roosevelt Boulevard, Pacific Boulevard and Maple Boulevard.

   The majority of the groins are of timber and stone composite construction and have deteriorated to a fair to poor condition. Of the 16 composite groins, one (Maple Boulevard) is underwater, six are completely deteriorated and are in poor condition with many dislodged, missing or broken capstone on the crest and side slopes. Eight other stone groins are in poor to fair condition. Rehabilitation is needed for all portions of the 24 groins. [11] Since the process and cost of filing for permits to replace the groins is cost prohibitive, the City may never be able to replace the groins (additional information about erosion hazard related to the condition of the groins is provided in Chapter II.C.4.b.(1). Refer to Exhibit_____, Groins and Condition.

   b. Bulkheads

   The City only has responsibility for bulkheads on street ends or City-owned property; bulkheads adjacent to private property are the responsibility of the homeowner. The City has spent $8-10 million in the last 20 years on bulkhead repair along West Bay Drive, Veteran's Memorial Park, the West End street ends, and the area behind the Long Beach Medical Center. When making repairs, the City has been raising bulkheads on the bay side from seven to nine feet, to protect street ends and City-

[9] Groins. United States Naval Academy. Accessed August 25, 2006 from http://www.usna.edu/naoe/courses/en420/bonnette/Groins.html.
[10] Ibid.
[11] Final Feasibility Report with Final Environmental Impact Statement (FEIS) Storm Damage Reduction Project, New York District, North Atlantic Division, Corps of Engineers. March 1998.

owned property against surge and splashing action. (additional information about bulkheads is provided in Chapter II.C.4.d.). See Exhibit _____, Bulkhead Condition.

(1) Canals

Approximately 5,200 linear feet of city-owned steel bulkheading exists on the easterly sides of the Sarazen, Ouiment and Hagen Canals. An additional 1,500 linear feet of timber bulkheading is present at street and canal ends.

The steel structures are approximately 40 years old and have a life expectancy of approximately 25 years. In 1987-1988, due to visible deterioration (excessive rust) occurring on the face of the steel, the City had a protective epoxy coating applied to the steel, which was intended to extend the lifespan of the bulkhead by ten years. The structures are beyond the life expectancy and are in need of replacement. Visible rippling in the steel bulkheads indicates that the street and land may have settled towards the canal. Overall these steel bulkheads need replacement, which is expected to cost about $6 million.

The over 1,500 linear feet of timber bulkheads present a more immediate concern. Timber bulkheading is susceptible to disintegration as a result of microscopic organisms in the water. The timber bulkhead typical lifespan of twenty years has been reduced to ten years as waterways have become cleaner and organisms that attach to and eat wood that cannot survive in polluted waters have now been found within the South Shore of Long Island. This is believed to be the cause for the collapse of the Clark Street Playground bulkhead, which was observed to have large open gaps between the sheets.

In the 1990s, the City replaced many of the street end bulkheads to a level of nine feet, and these are in good condition. The City retained a consultant in early 2007 to survey the remaining City-owned timber bulkheads in the canals, design new bulkheads and obtain permits.

The bulkheads on the western side of the canals, which are maintained by private homeowners, are largely older timber. The condition of these bulkheads, similar to the City bulkheads, varies widely. The City has implemented a policy of raising the height of City-owned bulkheads to nine feet during replacement. A nine foot height better protects street ends and City-owned property from wave surge action. There is no policy in place requiring private homeowners to raise bulkhead height to nine feet. As a result, the increased height of City owned bulkheads does not address flooding issues.

Insert Exhibit 16 Groins

Insert Exhibit 17 Bulkhead

(2) Reynolds Channel

The bulkheads abutting Reynolds Channel are owned and maintained by either the City of Long Beach, private landowners or institutional landowners (such as hospitals and schools). Public bulkheads can be found at street ends and on city-owned land that abuts Reynolds Channel. New and upgraded city-owned bulkheads are being built to an elevation of nine feet to prevent flooding.
The condition of private bulkheads along Reynolds Channel varies widely. Permit requests for bulkhead replacements in Reynolds Channel must be submitted to the Town of Hempstead and State of New York for review. Replacements can go no more than 18" beyond the existing structure.

Appendix ___, provides a table that summarizes the existing conditions of the City-maintained bulkheads. This table does not include the bulkheads along the Hagen, Ouiment, and Sarazen Canals.

c. Docks

The City of Long Beach Municipal Codes regulate docks and the mooring of watercraft in the City.

(1) The Canals and Reynolds Channel

The City of Long Beach Code of Ordinances, Chapter 6, Article III, Boats and Boating, Section 6-50, entitled, "Public mooring areas designated; not to affect abutting owners," states, "All of Sarazen Canal, Ouiment Canal and the southerly five hundred (500) feet of Hagen Canal, north of Pine Street, are removed from the areas designated as mooring and dock areas. The northerly one hundred eighty (180) feet of the east side of Hagen Canal is hereby designated as a "public mooring area."

The City of Long Beach Code of Ordinances, Chapter 6, Article III , Boats and Boating, Section 6-55 (a), Mooring Permits, states, "No boat shall moor or anchor for a longer continuous period than twelve (12) hours within an area designated as a dock or mooring area without first obtaining a permit therefore as provided in this section." Chapter 6, Article III §6-55 (b) states, " …the fees shall be one dollar ($1.00) for each permit; and Chapter 6, Article III §6-55 (c) The term of the permit shall be for one (1) year beginning the first day of March and shall expire on the last day of February next following. Chapter 6, Article III §6-55 (d) Contents of permit, requires, "…a description of the vessel to be moored or anchored, and the location of the mooring or anchorage permitted by the permit."

The City of Long Beach Code of Ordinances, Chapter 6, Article III, Boats and Boating, §6-74 states, "No person shall maintain, construct, install, rehabilitate or repair any structure over, on, into or adjacent to any waterway of the City of Long Beach except after obtaining a permit from the building department, and

unless that person is the owner or lessee of the upland at the place where such structure or mooring pile is proposed to be constructed or maintained."

As indicated in Chapter II.D.6.a, the City of Long Beach Code of Ordinances, Chapter 6, Article III, Boats and Boating, §6-82 states, "No structure installed, constructed, maintained, rehabilitated or repaired, and the boats and/or vessels moored or tie thereto, shall encroach into the waterway beyond one-third of the width of the waterway, or the following distances from the respective bulkhead lines, whichever is less:

- Sarazen Canal twenty-six (26) feet
- Ouiment Canal, twenty-four (24) feet
- Hagen Canal, twenty-seven (27) feet
- Bob Jones Canal, twenty (20) feet

Private docks also exist along Reynolds Channel. Private homeowners are required to obtain a permit from the Town of Hempstead for construction of a dock along Reynolds channel. Private homeowners have constructed docks adjacent to City-owned greenspace along West Bay Drive. The City of Long Beach instituted a "gate fee" for access to these docks in the late 1990s.

9. Fishing

a. Fishing Resources in Long Beach

(1) Commercial and Recreational Shellfishing

Each year the New York State Department of Environmental Conservation (DEC) collects and examines thousands of water samples to make sure shellfish growing areas are clean enough to allow the harvest of uncontaminated clams, oysters, mussels and scallops. If water quality is not up to New York State and national standards, DEC closes the area to shellfish harvesting. The regulatory program administered by DEC's Shellfisheries Section is intended to make sure that clams, oysters, mussels and scallops harvested and offered for sale in wholesale commerce in New York State are safe for people to eat.

6 NYCRR Part 41: Sanitary Condition of Shellfish Lands provides a statement of the classification of shellfish lands and safe harvesting areas for all the relevant water bodies in the State of New York. Due to the sanitary condition of shellfish lands in Reynolds Channel and of the Atlantic Ocean throughout Nassau County, these lands are designated as uncertified areas for the taking of shellfish for use as food. Refer to Exhibit _____, Atlantic Ocean Shellfish Closures.

(2) Commercial and Recreational Fishing

The New York State Department of Environmental Conservation, Bureau of Marine Resources, publishes Marine Recreational Fishing Laws and Regulations. These laws specify the minimum size in length in inches of the fish, allowed to be removed, the daily possession limits in number of fish and

the open fishing seasons, for each species of fish. More information regarding the limitations on recreational fishing is available in 6 NYCRR Part 40: Marine Fish.

The City of Long Beach Municipal Codes require the issuance of a fishing permit for pole and drop line fishing off the municipal pier (additional information about the municipal pier is located in Chapter II.D.6.a and see b below).

A variety of fish species with recreational and commercial importance can be found in the vicinity of Long Beach. Many species of fish use the shallow near shore waters as feeding areas. These include Atlantic mackerel, black sea bass, winter flounder, summer flounder (fluke), scup, tautog, northern puffer, striped bass, weakfish and blue fish. [12]

Off-shore shipwrecks, obstructions and large rocks in the near shore zone provide a habitat that supports Atlantic cod, Pollock, hake and black sea bass.[13]

There is no known commercial fishing based out of the City of Long Beach.

b. Fishing Related Sites and Access Methods

(1) Fishing Pier and Boat Launch

A public fishing pier is located at the northern terminus of Magnolia Boulevard. This pier was expanded in the mid 1990s, doubling its original size. From this site, residents can fish in Reynolds Channel (additional information about the municipal boat launch and pier is located in Chapter II.D.6.a).

The City of Long Beach Municipal Code, Chapter 6, Article II, Municipal Pier, Division 2, Section 6-28 states with regard to fishing, that, "It shall be unlawful to fish by any means from the municipal pier situated at Magnolia Boulevard and the Bay Front without first obtaining a permit." The City Clerk is responsible for the issuance of such permits, which are valid for a one year period, ending on the first of may each year. Section 6-31 indicates that permit holders may fish from the municipal pier during reasonable hours, using a fishing pole or a drop line. Fishing by any other means is prohibited.

The Veteran's Memorial Park boat ramp is available for use generally from dawn to dusk, but use is at the users own risk. The boat launch is most easily accessible via National Boulevard and parking is available in spaces adjacent to memorial Park (additional information about the municipal boat launch is located in Chapter II.D.6.a).

(2) Surfcasting

[12] Final Feasibility Report with Final Environmental Impact Statement (FEIS) Storm Damage Reduction Project. March 1998.
[13] Ibid.

Surfcasting is permitted in designated public areas along the ocean front. The basic fishing structures in Long Beach include a gently sloping sand beach featuring sand bars, cuts in the bar and troughs between the bar and the shoreline and the groins spaced approximately 700 feet apart starting at Pacific Boulevard in the east, continuing west into Atlantic Beach. The sand beach structures exist between the jetties at Long Beach and vary in their extent and presence over the course of a fishing season. [14]

[14]Stokes, Kurtis. Surf-Casting Long Beach, N.Y. – A Basic Primer. Stripers Online. Accessed August 25, 2006 from http://www.stripersonline.com/Pages/Articles/article_KurtisStokes_surfcastinglongbeach.shtml.

INSERT EXHIBIT 18, Atlantic Ocean Shellfish Closures

(3) Atlantic Beach Reef

A NYDEC artificial reef is located 3.0 nautical miles south of Long Beach, in the Atlantic Ocean. It is 413 acres in size and is at a depth of 55 to 64 feet. The reef was created using 30,000 tires, 404 auto bodies, 10 Good Humor trucks, nine barges, the tug Fran S, a steel lifeboat, steel crane and boom, surplus armored vehicles, rock, concrete slabs, pipes, culvert, decking and rubble, and 350,000 cubic yards of rock from a U.S. Army Corps of Engineers dredging project.

Artificial reefs have long been used to enhance marine habitat and attract marine fish and other animals for harvest. Reefs are built of any hard, durable structure that simulates the habitat of particular species of fish, crustaceans or mollusks. NYDEC reefs were developed to provide new fisheries habitat and more accessible fishing grounds for anglers. Fishes common to New York reefs include blackfish (tautog), black sea bass, porgy (scup), bergall (cunner), hake, and cod.[15]

c. Future Demand for Fishing

The increasing numbers of people residing in and traveling to Long Beach and its neighbors affects the future of fishing in the waters of Long Beach. As infrastructure gets more strained, threats to water quality increase, which could have a negative affect on the quantity and quality of fish. Primary concerns include:

- Habitat loss, including loss of tidal wetlands and saltwater marshlands losses and estuarine deterioration resulting from activities such as ditching, filling, diking, and natural disturbances such as natural disasters.
- Sedimentation caused by dredging that can significantly alter the physical composition of habitats.
- Pollution adversely affecting both shellfish and finfish. Pollutants include:[16]
  - Polychlorinated biphenyls (PCBs)
  - Mercury
  - Cadmium
  - Dioxin

d. Preservation and Improvement of Resources

(1) Water Quality

To meet the needs of the public, fish resources must be preserved and improved. To this end, measures to protect and improve water quality will be vital. The City has taken strides in reducing non-point source pollution and plans to implement additional measures to comply with the United States Environmental Protection Agency (EPA) Storm Water Phase II requirements. As detailed in the US EPA Storm Water Phase II Compliance Assistance Guide, the storm water discharges to certain municipal separate storm sewer systems (MS4s) are

[15] Marine Fishing Reefs. New York State Department of Environmental Conservation. Accessed August 25, 2006. <htttp://www.dec.state.ny.us/website/dfwmr/marine/access/reefs1.html#ab>.

[16] New York State Department of Health 2006-2007 Health Advisories, Chemicals in Sportfish and Game

covered by the Storm Water Phase II rules. The EPA Phase II rules require the operators of MS4s to implement programs and practices to control pollutes storm water runoff from the jurisdiction serviced by the MS4. The program must include the development and implementation of best management practices and measurable goals for six minimum measures. These measures include:

- Public education and outreach,
- Public participation/involvement,
- Illicit discharge detection and elimination,
- Construction site runoff control,
- Post-construction runoff control, and
- Pollution prevention/good housekeeping for municipal operations.[17]

The City of Long Beach prepares and submits annual Stormwater Management Program reports. Within the report the City must explain the different processes, activities, procedures, practices and measurable goals related to each of the six program areas.

In August 2007, the City enacted two laws, Sec. 1 Chapter 25, Article VI and Article VII of the Code of Ordinances of the City of Long Beach pursuant to the EPA Phase II Storm Water Management requirements.

The purpose of Article VI, Stormwater Management, is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety and welfare of the public and to conform to the substantive requirements of the New York State Pollutant Discharge Elimination System (SPDES) and the National Pollutant Discharge Elimination System (NPDES). This article seeks to achieve the following:

- Meet the requirements of minimum measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems;
- Require land development activities to conform to SPDES General Permit for Construction Activities;
- Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and streambank erosion and maintain the integrity of stream channels;
- Minimize increases in pollution caused by stormwater runoff from land development activities;
- Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable; and
- Reduce stormwater runoff rates and volumes, soil erosion, and nonpoint source pollution where possible, through stormwater management practices and to ensure that these management practices are maintained.

[17] US EPA. Storm Water Phase II Compliance Assistance Guide. March 2000.

The purpose of Article VII, Prohibition of Illicit Discharges, Activities, and Connections to Separate Storm Sewer System, is to regulate non-stormwater discharges to the Municipal Separate Storm Sewer System (MS4) to the maximum extent practicable. The objectives of the ordinance are:

- To meet the requirement of the State Pollutant Discharge Elimination System (SPDES) General Permit for Storm Water Discharges from MS4s;
- To regulate contribution of pollutants to the MS4 since such systems are not designed to accept, process or discharge non-stormwater wastes;
- To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with ordinance;
- To promote public awareness of the hazards involved in the improper discharge of non-stormwater.

The City is also in the process of mapping its storm drainage program, and has implemented a catch basin cleaning program.

(2) Fishing Limits

Limits on the size and number of specific fish have been established by the New York State Department of Environmental Conservation (DEC) in an effort to limit over fishing. The Town of Hempstead and DEC provide copies of a fishing chart that includes season, size and quantity limits, on their web pages. This chart lists restrictions for the number and/or size of blackfish, black sea bass, bluefish, codfish, mackerel, Pollock, porgy snapper, striped bass, summer flounder, weakfish and winter flounder, along with any seasonal restrictions that may apply.[18]

10. Navigation

Reynolds Channel is located in the bay area north of Long Beach Island, with ocean outlets at East Rockaway Inlet and Jones Inlet. The New York State Boat Channel continues eastward through the bays behind Jones Beach Island to a point near Captree Island and Oak Beach, with ocean outlets at Jones Inlet and Fire Island Inlet. The East Rockaway Inlet from the Atlantic Ocean is located approximately five miles west of Long Beach and the Jones Beach inlet to the Atlantic Ocean is approximately six miles to the east. Refer to Exhibit _____, Navigation Chart.

The water depth of Reynolds Channel along the City of Long Beach varies from one to eight feet at areas adjacent to the bulkhead and shoreline. Water depths increase up to 60 feet within the channel. Based on navigation charts, generally the water depth along the marked navigation route of the channel is 13 to 26 feet. The navigation charts indicate an underwater cable and pipeline across the Channel between the railroad bridge and the Long Beach Bridge. The presence of underwater cables and pipelines restrict the use of

[18] Fishing Chart. Accessed April 17, 2007. http://tohli/rc/fishing/chart.html.

this area as an anchorage or mooring area for boats. Also, dredging would be restricted in such areas.

It is noted that in March 2006, the U.S. Coast Guard (USCG) contacted the National Oceanic & Atmospheric Administration (NOAA) Office of Coast Survey[19] for assistance in surveying to identify potential shoaling (or areas that have become shallow) in Reynolds Channel, on the inshore side of Long Beach and Jones Beach, New York. Both commercial fishing and recreational boats heavily use these federal channels, located on the south shore of Long Island. NOAA Navigation Response Team 5 found significant shoaling throughout the channel. In some areas, discrepancies between the charted depths and sounding data exceeded 20 feet. The collected data will be used by the USCG to reposition and add buoy markers designating the shallow portions of the channel in the surveyed areas. Though this survey was not an emergency response, it was an urgent request to complete because of the upcoming summer season, when recreational traffic significantly increases throughout the area.

The tidal influence on Reynolds Channel causes a mean tide range of approximately 3.9 feet and a spring maximum range of 4.7 feet. Higher tides caused by 'nor'easter" storms often impact Long Island. The currents associated with the ebb and flood tides vary throughout the Channel due to width of the channel and water depth. Between the railroad and highway bridge, the current is approximately 0.6 knots on the ebb (or falling) tide and 0.5 knots on the flood (or rising) tide.

The existing Reynolds Channel depths restrict existing commercial and industrial uses including oil tankers, municipal barges, commercial clamming trawlers, private party and fishing head boats, and recreational boaters. Vessels must "lightload" or only use the channels at high tide. The USA Corps of Engineers completed a reconnaissance study in June 1995. This study identified four primary problem areas. These problem areas were identified as Reaches 1 through 4, of which Reaches 1 and 2 relate to the City of Long Beach. Reach 1 consists of Reynolds Channel from the existing authorized Federal channel at East Rockaway Inlet through the entrance to Hog Island Channel and up to the oil tanks located at Oil City. Reach 2 consists of Reynolds Channel from the entrance of Hog Island Channel to the Point Lookout Bridge and continuing to the Federal navigation channel at Jones Inlet. Reaches 3A and 3B consist of Long Creek (3A) from the Loop Causeway Bridge to the entrances to Woodcleft Canal, Hudson Channel and Freeport Creek and Sea Dog Creek (3B) from Reynolds Channel to Long Creek. Reach 4 consists of Reynolds Channel from Jones Inlet to Fire Island Inlet. The Reconnaissance study findings and conclusions indicate potential Federal interest in proposed plans for establishing navigation improvements for Reaches 1, 2 and 4.

At the completion of the study, there was a Federal interest in pursuing a more detailed study to determine the feasibility of navigation improvements. The feasibility study would have further developed improvement plans to ascertain the most suitable solution for the study area's problems. The study would have also considered the potential for environmental restoration measures and beneficial uses of dredged material, if

[19]< http://nauticalcharts.noaa.gov/cgi-bin/redir.cgi?url=http.//nauticalcharts.noaa.gov/>

determined to be appropriate. However, as a result of not being able to secure funding, the feasibility study initiation was not scheduled.[20]

The Long Island Railroad and the Long Beach Road Bridge, part of the county road system, each cross Reynolds Channel. The Long Beach Bridge is a bascule bridge with twin spans and has a 100 feet wide clear span and a 20 feet vertical clearance (above mean high water). The Long Island Railroad bridge is a swing bridge with 85 feet horizontal clearance (open) and 14 feet vertical clearance. Each bridge is operated by the owner and subject to Federal regulations[21] since Reynolds Channel is a federal navigation channel

A summary of the Federal requirements, as described in Title 33-Navigation and Navigable Waters, Chapter I – Coast Guard, department of Transportation, Part 117 – Drawbridge Operation Regulation, is as follows:

- At all times, public vessels of the United States, state or local vessels used for public safety and vessels in distress shall be passed through the draws of each bridge listed in this section as soon as possible.
- The draw of each bridge listed in this section need not be opened for sailing vessels, unless the vessels are under machinery power or under tow, if an opening would unduly delay other vessel or vehicular traffic.
- The owners of the bridges listed in this section shall provide and keep in good legible condition two board gages painted white with black figures not less than eight inches high to indicate the vertical clearance under the closed draw at all stages of the tide. The gages shall be so placed on the bridges that they are plainly visible to operators of vessels approaching the bridges either up or downstream. (Where the gages are visual indications of the bridge clearance. They allow boaters to know the vertical bridge clearance in any tide condition.)
- The draw of the Long Beach Bridge across Reynolds Channel, mile 4.7, shall open on signal; except that:
  - From midnight to 8 a.m. year-round, the draw shall open on signal if at least four hours notice is given; and
  - From 3 p.m. to 8 p.m. on Saturdays, Sundays, and holidays from May 15 through September 30, the draw need be opened only on the hour and half hour.

Navigation within Reynolds Channel is subject to all provisions of the Navigation Law of the State of New York, all the Inland Rules enacted by Congress and governing the navigation of the inland waters of the United States, and all the Pilot Rules for the United States Inland Waters applicable to the waters of Reynolds Channel as the channel is shown on the U.S. Coast and Geodetic Survey Chart No. 579 issued by the U.S. Navy Hydrographic Office (now NOAA Cart 12352), relative to the rules for vessels passing

[20] Reynolds Channel & New York State Boat Channel, Shallow Draft Navigation Fact Sheet, US Army Corps of Engineers, New York District, accessed April 16, 2007.

[21] Title 33--Navigation And Navigable Waters, Chapter I--Coast Guard, Department Of Transportation, Part 117--Drawbridge Operation Regulations- Subpart B--Specific Requirements, Sec. 117.799 Long Island, New York Inland Waterway from East Rockaway Inlet to Shinnecock Canal.

each other, as to lights on vessels and other matters consistent with the proper use of Reynolds Channel shall be complied with by all vessels navigating the channel.

In addition to the Federal regulations pertaining to the navigation channel, Chapter 6, Article III, Boats, Docks and Waterways, of the City Code provides additional regulations for the operation, mooring and anchoring of vessels within Reynolds Channel and applies to all waters or waterways within the city or subject to its jurisdiction, except when prohibited by the laws of the United States. These include the following:

- Boats shall not moor or anchor except at the edges of the navigable channel as designated on the said U.S. Coast and Geodetic Survey Chart No. 579 or in areas designated as dock or mooring areas on the chart on file in the office of the city clerk. In no case shall vessels moor to or anchor within fifty (50) feet of the channel markers or so as to interfere with the full use of the channel.
- Vessels shall not moor or anchor so as to endanger the safety of or cause damage to any vessel previously anchored or moored, nor so as to interfere with the mooring of any boat previously laid down.
- No person shall operate a boat or vessel in or upon any waters adjacent to the City of Long Beach to a distance of fifteen hundred (1500) feet from the shore thereof at a speed greater than twelve (12) miles per hour, where such speed limitation is so reasonably posted.
- No person shall operate a boat or vessel at a speed greater than five (5) miles per hour in or upon any waters within the City of Long Beach or adjacent to the City within a distance of one hundred (100) feet from the shore or from any anchored or moored vessel.

11. Dredging

a. Reynolds Channel

Following the running aground of a fuel tanker in November 2006, the Army Corps of Engineers committed to the dredging of East Rockaway Inlet to Reynolds Channel. The dredging occurred between January 10 to January 21, 2007, to provide for a channel 12 feet deep. Maintenance of dredging allows continued access for fuel tankers to Nassau County. As stated in Chapter II.D.10, there is Federal interest in pursuing a more detailed study to determine the feasibility of navigation improvements in Reynolds Channel, since deepening channels and providing a more direct navigation route would result in transportation savings.[22]

b. The Canals

Sedimentation and siltation has occurred in the canals due to urban runoff, stormwater outfalls depositing debris, and the lack of an adequate tidal flush. The water depth within the canals is becoming restricted, and as the canals continue to be subject to additional siltation, boating will become restricted and the use of areas may

[22] Reynolds Channel & New York State Boat Channel, Shallow Draft Navigation Fact Sheet, US Army Corps of Engineers, New York District, accessed April 16, 2007.

be restricted to high tide periods. The City does not have any active program for dredging of the canals.

INSERT EXHIBIT 19, Navigation Chart

Appendix _____ To be placed in appendix at the end of the full document.

Table III. D-4
Status of City-Maintained Bulkheads[23]

Location	Year Built (Estimate)	Linear Feet (Estimate)	Composition	Elevation Above Sea Level (Approximate)	Projected Life Expectancy (years)	Condition
Ohio (street end)	1998	50	TP	9.0	10+	Good
Connecticut (street end)	1998	46	TP	9.0	10+	Good
Georgia (street end)	1998	48	TP	9.0	10+	Good
Indiana (street end)	1998	48	TP	9.0	10+	Good
Indiana Fire House	Pre-1980	65	TT	7.0	Beyond life	Bulkhead needed
Maryland (street end)	1998	48	TP	9.0	10+	Good
Minnesota (street end)	1998	48	TP	9.0	10+	Good
Tennessee (street end)	1998	48	TP	9.0	10+	Good
Virginia (street end)	1998	48	TP	9.0	10+	Good
Wyoming (street end)	1998	48	TP	9.0	10+	Good
Delaware (street end)	1998	48	TP	9.0	10+	Good
Arizona (street end)	1998	48	TP	9.0	10+	Good
Pennsylvania (street end)	1998	48	TP	9.0	10+	Good
700 West Chester (street end)	1996	80	SC	9.0	30+	Good
Grand (street end)	1996	257	SC	9.0	30+	Good
Lindell (street end)	1996	100	SC	9.0	30+	Good
Washington to Magnolia (west-side)	1998	2420	SC	9.0	30+	Good
Magnolia through Waterfront Park	1995	1400	SC	9.0	30+	Good
Waterfront Park to LIRR (east-side)		400	RIP-RAP	6.0		Bulkhead needed
LIRR (east-side) to LB Bridge		1700	RIP-RAP	6.0		Bulkhead needed
Tennis Courts	Pre-1970	312	SD	7.0	Beyond life	Bulkhead needed
Monroe (street end)		60	RIP-RAP	6.0		Bulkhead needed
East State (street end)	Pre-1990	60	TT	7.0	Beyond life	Bulkhead needed
East Chester at Sarazan Canal	Pre-1990	88	TT	7.0	Beyond life	Bulkhead needed
East Chester at Ouimet Canal	Pre-1990	83	TT	7.0	Beyond life	Bulkhead needed
East Chester at Hagen Canal	Pre-1990	91	TT	7.0	Beyond life	Bulkhead needed
East Chester at Bob Jones Canal	Pre-1990	30 of 80	TT	7.0	Beyond life	Bulkhead needed
Doyle (street end)	Pre-1990	208	TT	7.0	Beyond life	Bulkhead needed

[23] Raab, Robert L, P.E., Commissioner of the Department of Public Works, City of Long Beach. Letter dated 9/5/06.

Doyle (grass mall)	1967	1810	SD	7.0	Beyond life	Bulkhead needed
Armour (street end)	Pre-1990	34	TV	9.0	20+	Bulkhead needed
Kerrigan (street end)	Pre-1990	34	TT	7.0	Beyond life	Bulkhead needed
Dalton (street end)	2003	40	TV	9.0	20+	New
Boyd (street end)	Pre-1990	28	TT	7.0	Beyond life	Bulkhead needed
Heron (street end)	Pre-1990	258	TT	7.0	Beyond life	Bulkhead needed
Heron (grass mall)	1967	1781	SD	7.0	Beyond life	Bulkhead needed
Kirkwood (street end)	2005	40	TV	9.0	20+	New
Barnes (street end)	Pre-1990	40	TV	9.0	20+	Bulkhead needed
Farrell (street end)	Pre-1990	40	TT	7.0	Beyond life	Bulkhead needed
Vinton (street end)	Pre-1990	30	TT	7.0	Beyond life	Bulkhead needed
Clark (street end plus park)	1990	575	TT		Beyond life	Bulkhead needed
Clark (grass mall)	1967	1607	SD	7.0	Beyond life	Bulkhead needed
Harmon (street end)	Pre-1990	40	TV	0.0	20+	Bulkhead needed
Curley (street end)	2006	40	TV	9.0	20+	New

Composition Categories Code
SC Cantilever Steel
SD Steel with Deadman System
TT Timber Frame/Timber Sheets with Deadman System
TP Timber Frame/Plastic Sheets with Deadman System
TV Timber Frame/Vinyl Sheets with Deadman System
RIP-RAP A pile of stone or concrete debris placed on the slope of the bank to stabilize the area and reduce erosion
Note: Upper wale added to Canal street end bulkheads to increase wave protection in the early 1990s